

Kansas Department of Health and Environment

Bureau of Environmental Remediation, Remedial Section

State Water Plan Contamination Remediation Program



Former Great Western Refinery Site

Background:

The former Great Western Refinery site originally operated as an oil refining and pipeline operation. Axle grease, gasoline, and kerosene were the primary products produced at the facility. The refinery ceased operations in the early 1920s because oil production in the area was not sufficient to support the refinery operations. KDHE's Site Assessment program completed a Preliminary Assessment and Scanning Site Investigation for the site in 1990. According to these reports, waste at the site is comprised of a hardened sludge type material that has a tendency to soften during warm weather. Samples collected from the waste pile indicate high levels of polynuclear aromatic hydrocarbons and extremely low pH.



Sludge stockpile

Solution:

In 2001, the site was assigned to KDHE's State Water Plan program to perform remediation activities at the site. Upon investigation, it was determined that the current land owner excavated and attempted to stabilize and encapsulate the waste material at the site in 1995.

KDHE determined it's efforts at the site would focus primarily on determining if the 1995 excavation efforts conducted by the land owner had not stabilized the waste preventing it from migrating within the subsurface. Trenching and excavation activities were initiated at the site in September 2002. These activities included the excavation and sampling of six trenches located in the 1995 remediation area, 36 test pits located throughout the property to determine if additional waste material was present that was not addressed in 1995, and the remediation of an area of hardened sludge in the western portion of the property. These excavation activities and additional testing, determined that the encapsulated wastes at the site are environmentally contained.



Trench with stockpiles of clay cover (left) and sludge/clay mixture (right) 9/10/02.



Site after excavation and partial regrowth.

Benefits:

- **Encapsulated wastes at site are environmentally contained.**